DOCUMENT RESUME

ED 314 793 CS 507 013

AUTHOR Schrader, David
TITLE Toward a Conceptual Refinement of Interpersonal Communication Competence: An Analysis of Subjects' Conceptions of Adept and Inept Communicators.
PUB DATE May 89
NOTE 52p.; Paper presented at the Annual Meeting of the International Communication Association (39th, San Francisco, CA, May 25-29, 1989).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Evaluative/Feasibility (142)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS Communication Research; *Communication Skills; Discriminant Analysis; Evaluation Methods; Higher Education; *Interpersonal Communication; *Interpersonal Competence; Measurement Techniques; Models
IDENTIFIERS *Communication Competencies; Communication Indicators

ABSTRACT

A study examined the concept of interpersonal communication competence in order to construct a more refined instrument than those currently used to measure competence. Using 70 items drawn from several existing measures of competence, 660 volunteer subjects from undergraduate communication courses at a large midwestern university provided their conception of adept and inept communicators, defined respectively as the best and worst communicators they know. Direct and multiple step-wise discriminant analyses were performed to determine the extent to which these items best discriminated between subjects' conceptions of adept and inept communicators, and to determine which of the 70 items best discriminated between these conceptions. Canonical discriminant functions revealed that the subjects clearly distinguished between adept and inept communicators. Classification results revealed that nearly 97% of the cases were classified correctly. Results of the multiple step-wise discriminant analysis indicated that 39 of the 70 items best discriminated between these conceptions. Further steps in instrument development are discussed, and a theoretical foundation for interpersonal communication competence is presented. (Four tables of data are included; 44 references are attached.) (Author/KEH)

TOWARD A CONCEPTUAL REFINEMENT OF INTERPERSONAL COMMUNICATION COMPETENCE: AN ANALYSIS OF SUBJECTS' CONCEPTIONS OF ADEPT AND INEPT COMMUNICATORS

By David Schrader
Indiana University

Paper presented to the International Communication Association
San Francisco, CA
May, 1989

TOWARD A CONCEPTUAL REFINEMENT OF INTERPERSONAL COMMUNICATION COMPETENCE: AN ANALYSIS OF SUBJECTS' CONCEPTIONS OF ADEPT AND INEPT COMMUNICATORS

ABSTRACT

This study attempts to refine the concept of interpersonal communication competence by developing a general measure of interpersonal communication competence. Using seventy items drawn from several existing measures of competence, subjects provided their conceptions of adept and inept communicators, defined respectively as the best and worst communicators they know. Direct and multiple step-wise discriminant analyses were performed to determine the extent to which these items best discriminated between subjects' conceptions of adept and inept communicators, and to determine which of the seventy items best discriminated between these conceptions. Canonical discriminant functions revealed that subjects in this study clearly distinguished between adept and inept communicators. Classification results revealed that nearly 97% of the cases were classified correctly. Results of the multiple step-wise discriminant analysis indicated that 39 of the 70 items best discriminated between these conceptions. Future steps in instrument development are discussed, and a theoretical foundation for interpersonal communication competence is presented.

Efforts to conceptualize interpersonal communication competence, most notably those by Bochner and Kelly (1974), Larson, Backlund, Redmond, and Barbour (1978), McCroskey (1982), and Spitzberg (1983), have generated considerable scholarly discussion and criticism (e.g., see Cegala, 1982; Duran, 1982; Larson, 1978; Pearson and Daniels, 1988; Phillips; 1983; Van Hoeven, 1985; Wiemann and Backlund, 1980). Unfortunately these stimulating and provocative analyses have failed to produce a consensual view of the interpersonal communication competence construct, a result more inevitable than indicting, given the fact that the investigative work in the field remains in an exploratory stage. However, most researchers concur on one matter regarding the construct: The need to specify the behaviors indicative of competent interaction.

Thus far, attempts to explicate those behaviors (and the traits inferred from them) have generated an extensive but somewhat incoherent body of literature. Spitzberg (1986) provided a possible explanation for this incoherence by describing the typical approach to instrument development: "Most measurement attempts to date have simply intuited the factors and the items to be assessed. Typically, a set of 'skills' is conceptualized to be essential to competent interaction, a pool of items supposedly referencing those skills is generated, and their reliability and factor structure are examined" (p. 4). As a result, while several instruments designed to measure communication competence currently exist, those instruments vary considerably in their factor structures (see Spitzberg, 1986, p.

5). For instance, Snavely and Walters (1983) noted that an examination of six conceptualizations of interpersonal communication competence uncovered 18 different dimensions, only six of which were common to more than one model. An examination of the development of several existing instruments designed to measure communication competence and its related constructs will illustrate how these disparaties evolved.

Several researchers reviewed relevant literature to derive their instruments. Farber (1962) referenced Fotte and Cottrell's (1955) proposed elements of competence in interpersonal relations (health, intelligence, judgment, autonomy, creativity, and empathy) to create 104 items "regarded intuitively" as reflective of those elements. They obtained a five-factor solution (perceived empathy, autonomy, resourcefulness, cooperativeness, and predictive empathy) from husbands' responses in a study of marital relations. Holland and Baird (1968) also operationalized Foote and Cottrell's conceptualization to develop their Interpersonal Competency Scale (ICS). Although they did not submit their 20-item instrument to factor analysis, they conducted an extensive program of concurrent and predictive validation that ed them to conclude that "the ICS should be regarded as a rough measure of a general disposition or capacity for interpersonal competency" (p. 509).

Barrett-Lennard (1962) developed the 92-item Relationship Inventory by operationalizing Rogers' (1957) conditions of therapy (level of regard, empathic understanding, congruence, unconditionality, willingness to be known). The content of the

instrument's items was validated by expert judges from the field of clinical psychology. The instrument reliably discriminated expert from nonexpert therapists. Wright, Bond, and Denison (1968) constructed a measure of personal effectiveness by creating 73 items "assumed to possess content validity" for the positive mental health construct. They divided these items into six a priori categories: self-concept; self-actualization; integration; autonomy; perception of reality; and environmental mastery. Intercorrelations of the items yielded 30 items suitable for their scale, which correlated strongly with a separate measure of personal effectiveness.

Bienvenu (1971) searched marital, parent-child, and group communication literature to develop the Interpersonal Communication Inventory (ICI). The Inventory's 50 items produced five factors--self-concept, listening, clarity of expression, coping wiht angry feelings, and self-disclosure--and reliably discriminated good and poor communicators for a sample with diverse demographic characteristics. Wiemann (1977) reviewed literature "dealing with face-to-face conversational encounters" to derive a definitional model of communication competence composed of the following dimensions: affiliation/support, social relaxation, empathy, behavioral flexibility, and interaction management. However, confirmatory factor analysis revealed that one "general communicative competence" factor accounted for nearly 83 percent of the variance in subjects' perceptions of a videotaped confederate's interaction.

In a test of the content and construct validity of the

Communicative Adaptability Scale, Duran (1983) obtained a five-factor solution for adults (social confirmation, articulation, social composure/experience, wit, apprcpriate disclosure) and a six-factor solution for college students (social composure and social experience comprised separate factors; the other four factors were the same). Duran examined several bodies of literature to create items for each of the CAS's dimensions. Correlations between these dimensions and measures of self-esteem and communication apprehension established the CAS's construct validity. Finally, Spitzberg and Hecht (1984) examined "several extant factor analytic studies of competence and social skills" to derive five factors of communication competence: anxiety, immediacy, expressiveness, interaction management, and other orientation. They reviewed relevant literature to operationalize these skill components, which exhibited positive relationships with a measure of communication satisfaction.

Other researchers have developed their instruments by extracting items from existing measures. For instance, Macklin and Rossiter (1976) devised the Interpersonal Communication Report (ICR), a scale to measure interpersonal communication relevant to psychological health, from questionnaires by Navran (1967) and Bienvenu (1971). Factor analysis yielded three factors (expressiveness, self-disclosure, understanding), all of which correlated positively and significantly with a measure of self-actualization. Walters and Snavely (1981) created measures for four dimensions of communication competence--self-disclosure,

social anxiety, listening, empathy--by excerpting items from instruments compiled by Bienvenu (1971), Holland and Baird (1968), Macklin and Rossiter (1976), and Wiemann (1977). Eadie and Paulson (1984) tapped Pearce and Cronen's (1980) competence measure and the principal factor of Wiemann's (1977) measure to construct a measure of communication competence. The authors supplemented these items by creating items to reflect the appropriate, effective, and creative use of language. Their 12-item instrument yielded three factors: empathy (seven items); creativity (three items); and enmeshment (two items).

Pavitt and Haight (1986) compiled a list of 22 behaviors and traits from communication and psychology instruments measuring interpersonal behavior to examine subjects' conceptions of "prototypic communicators of different levels of competence." Cupach and Spitzberg (1981) conducted the most exhaustive review of existing instruments to assemble the Self-Rated Competence (SRC) Scale, an "event-focused" measure of communication competence. They surveyed 18 instruments related conceptually to competence to compile an original list of 66 items. Reliability and exploratory factor analyses of these items yielded a 28-item instrument consisting of three factors: other orientation, conversation skills, and self-centered behavior. The SRC accounted for 16% of the variance in subjects' evaluations of face-to-face conversations on Hecht's (1978) Communication Satisfaction Scale.

A third method of item generation for instrument construction involves the observation and coding of behavior.

Mehrabian and Ksionzky (1972) coded the molecular verbal and nonverbal behavior of subjects to derive a set of basic dimensions for characterizing social behavior. Factor analyses of the measures taken during the interaction yielded eight dimensions: affiliative behavior, responsiveness, relaxation, ingratiation, distress, intimacy of position, verbal report of affiliation with others, and number of friends. Gillingham, Griffiths, and Care (1977) assessed the behavior of videotaped subjects to obtain six frequency and duration measures as well as eleven general ratings scales. Interrater reliabilities on the frequency and duration measures were significantly higher than those for the general rating scales, indicating that raters made different attributions based on similar behaviors.

In two studies researchers involved subjects in the item generation process. Phillips (1949) generated a list of items that discriminated effective from ineffective communication by eliciting analyses of good and poor conversation from college students. Lowe and Cautela (1977) asked subjects to list social traits that they used to describe their own or others' behavior to facilitate the construction of the Social Performance Survey Schedule (SPSS). The authors then composed the instrument's items by "defining behaviorally" each of the social traits. These behavioral definitions were created by listing "all of the verbal and nonverbal behaviors typically used to draw inferences about the 'presence' of a trait." It is curious that Lowe and Cautela did not have subjects provide the behavioral definitions to the social traits they generated. While the authors

maintained control over the item generation process with their method, they could not be certain that their behavioral definitions were similar to those their subjects were accessing when they generated the social traits.

Only one existing instrument was constructed using multiple methods of item generation. Spitzberg and Hurt (1987) developed the Conversational Skills Rating Scale (CSRS) through a four-stage item generation process. They solicited subjects' open-ended descriptions of competent and incompetent interactions and reviewed relevant literature to generate their original item pool. Redundant and irrelevant items were eliminated, and the remaining 40 items were placed into one of four "skill clusters." The final, 25-item version of the CSRS produced three factors: altercentrism, vocal expressiveness, and composure. Spitzberg and Hurt concluded that the CSRS "comprised a reliable and valid set of behaviors that (were) systematically related to impressions of competence in interactions."

Considering the myriad perspectives from which the above instruments were developed, it is hardly surprising that there is little accord in their factor structures. Most existing instruments were developed by applying one of four methods of item generation. A select few utilized more than one of these methods, and even those using the same method perused distinct bodies of literature. Consequently, while existing measures of communication competence and its related constructs certainly tap some of the traits and behaviors essential to subjects' evaluations of competence, it is questionable whether any one

instrument is comprehensive. At the same time, the diverse nature of this collection of instruments provides an expansive view of the communication competence construct, a breadth that can be capitalized on by treating these instruments as an item pool from which to begin the development of a more comprehensive instrument.

In essence, this study is the initial phase in a program of research designed to answer Spitzberg's (1986) call for "inductive theory construction in communication competence" (p. 5). While the nature of the present phase is admittedly deductive, it is important to remember that it represents an inaugural stage in instrument construction. Subsequent studies employing interviews, group discussions, open-ended questionnaires, diaries, and direct observation of behavior will generate additional items. The review of existing instruments demonstrates clearly the lack of representation these methods, which solicit more directly the perspective of the subject, have experienced. This appears to be a critical oversight, given the fact that subjects are the consumers and targets of such instruments.

The present study will address this oversight, albeit modestly. In the item selection process, subjects ordinarily provide self- or other-descriptions using items proposed by the researcher. Consequently, subjects have little or no input regarding the items that they use to formulate their perceptions, leaving open to conjecture the relevance of those items. In the present study subjects will be asked to use their conceptions of

adept and inept communicators in order that items best discriminating those conceptions can be explicatied. By using conceptions rather than perceptions, the issue of relevancy becomes less problematic. Previous research by Pavitt and Haight (1985; 1986) provides some evidence for the assumption that individuals' conceptions of communication competence "serve as the basis for the evaluation of communicative performance" (1985, p. 239). The same authors also found that subjects produced a wider variety of characteristics for the "communicatively competent prototype" than they did for a communicator in a specific situation. This finding carries important implications for the item generation process, since it seems preferable to generate as many items as possible in that process. Future studies can focus on the situational relvancy of those items. In addition, use of the conception rather than the perception shifts the issue from whether or to what extent a particular individual exhibits a given behavior to whether or to what extent the behavior in general is effective or ineffective. Bochner and Kelly (1974) have argued that the "validity and practicality" of any framework or instrument designed to measure interpersonal skill "depends on the extent to which it can be used to discriminate effective and inept communicators" (p. 289). Therefore, this study will address two interrelated research questions:

RQ1a: To what extent do items selected from existing competence instruments discriminate between subjects' conceptions of adept and inept communicators?

RQ1b: Which items selected from existing competence instruments best discriminate between subjects' conceptions of adept and inept communicators?

METHOD AND PROCEDURES

Data Collection

Development of the Measuring Instrument

The Pool of Items

Spitzberg and Cupach (1984) reviewed various communication competence instruments and selected a list of 163 "behaviorally focused" items from self-report competence instruments and assessments that have been developed by several authors (Bienvenu, 1971; Cegala, 1981; Duran, Zakahi, & Parrish, 1981; Eadie & Paulson, 1984; Elder, Wallace, & Harris, 1980; Gillingham, Griffiths, & Core, 1977; Holland & Baird, 1968; Kelly & Chase, 1978; Lowe & Cautela, 1978; Macklin & Rossiter, 1976; Phillips, 1949; Pavitt, 1982; Spitzberg & Hecht, 1984; Walters & Snavely, 1981; Wheeless & Duran, 1982; and Wiemann, 1977). This list provided an adequate representation of the dimensions of communication competence, and included items that were affective, behavioral, and cognitive as well as molar and molecular in nature. Therefore, this list comprised the pool of items from which the instrument developed for this study were drawn.

Derivation of Items

Since several of the 163 items from the Spitzberg & Cupach (1984) list were either redundant or similar in nature, the list was pared in order to make it more manageable for the respondents. To facilitate this reduction, the items were arbitrarily placed into one of 25 categories based on the type of behavior referenced by that item. One hundred-five items remained after redundant items were eliminated and similar items were combined. Most common among the redundant items were those that referenced "eye contact" and "listening." "I am relaxed, comfortable, and self-confident when speaking," is an example of an combined item. Initially, it was three different items.

Sixty items were selected at random from the condensed list of 105 items. Of the sixty items selected, four were considered to be too ambiguous or context-dependent, and were stricken from the list ("smiled very much"; "arms/legs crossed"; "asks questions when others are talking"; and "facial expression strained"). However, the following fourteen items, considered theoretically or behaviorally important based on a review of the literature, were added to the list, increasing the list of items included in the experimental instrument to seventy: "People seek me out to tell me about their troubles"; "Refuses to change his/her opinions or beliefs"; "Do other persons have a tendency to put words in your mouth when you are trying to explain something?"; "Indicated support for what I was saying with head nods, 'um-hmms,' and/or approving comments"; "Seems impatient for

others to finish their remarks"; "Talks too much about himself/herself"; "Puts himself/herself down"; "Do you hesitate to talk at social affairs because you're afraid people will criticize you if you say the wrong thing?"; "Shows interest in what another is saying (with appropriate facial movement, comments, and questions, for example)"; "Do you fail to express disagreement with others because you are afraid they will get angry?"; "Blames others for his/her problems"; "Interrupts others"; "Threatens others verbally or physically"; "Insults others"; and "Perceives insults or criticisms when none were intended."

Item Format

Since many of the instruments from which items were selected used a Likert scale, items for this study were set up using a seven-point Likert scale. Items that were not originally written in Likert form were rephrased to conform with the Likert format. For instance, items that were originally written in first or second person were rewritten in third person. Items originally written in the interrogative form were simply rewritten in declarative form. Alterations of the items were made in order to maintain consistent phrasing, and to enable subjects to describe the best and worst communicators they know, descriptions that will be made in the third person (he, she, they). The order of the items was determined randomly.

Administration of the Instrument

Subjects

Subjects for this study were volunteers from undergraduate communication courses at a large midwestern university. A sample size of 660 was drawn in order to achieve adequate variability and to maximize the reliability and power of the study.

Instructions to the Subject

Using the pool of 70 items, subjects were first asked to provide their conceptions of an "adept" communicator, defined as the best communicator they know. Using the same pool of items, they were then asked to provide their conceptions of an "inept" communicator, defined as the worst communicator they know. Each test booklet contained a page of instructions to the participant, both forms of the 70-item instrument, and two General Coding Sheets.

Data Analysis

In order to determine which of the 70 items best discriminated between adept and inept communicators, direct and multiple step-wise discriminant analyses were conducted on subjects' responses to the items. In direct discriminant

analysis, "discriminant scores" for each item are computed in order to determine which group or category that item belongs to. These scores are obtained by finding linear combinations of the independent variables that result in the best separation among groups. Multiple step-wise discriminant analyses identify the variables that are most important for distinguishing between adept and inept communicators (Norusis, 1985).

RESULTS

Data from 660 subjects were analyzed. However, since each subject provided conceptions of both adept and inept communicators, 1320 observations were included in the analysis. After 134 observations were excluded due to missing data, 1186 observations were entered into the analysis.

Direct Discriminant Analysis Results

A direct discriminant analysis was performed to address Research Question 1a: To what extent do items from existing measures of communication competence discriminate between subjects' conceptions of adept and inept communicators?

Table 1 lists the 39 discriminating items from the instrument. These items will be discussed in detail in the final section of this article. Group means and standard deviations for the 39 discriminating items are listed in Table 2. The quality of these means was determined by significance tests which produced a Wilks' lambda, an F-ratio, and a significance level

for each item. These values are also listed in Table 2. The significance levels ($p > .0001$) and their corresponding F values indicate that group means were not equal.

Insert Tables 1 and 2

About Here

Table 3 depicts the classification results along with the canonical discriminant functions evaluated at group means and the canonical discriminant functions. Perusal of this table indicates that nearly 97% of the cases were classified correctly. The canonical discriminant functions at group means represent the average score for each group (-2.26 for adept and 2.31 for inept).

Of the values listed under the canonical discriminant functions, the eigenvalue of 5.23 indicates an excellent discriminant function, and reflects a large between-group to within-group variability ratio. Specifically, the obtained eigenvalue indicates that the between-group variability is more than five times (5.23) greater than the within-group variability. The high canonical correlation value (.92) indicates a strong association between discriminant scores and groups and a large between-group variance. In direct discriminant analysis the canonical correlation is essentially a validity check. The small Wilks' lambda value (.16061) reflects

a relatively large variance between groups and a relatively small variance within groups.

Insert Table 3
About Here

Results of the Multiple Step-Wise Discriminant Analysis

Results of the multiple step-wise discriminant analysis were used to address Research Question 1b: Which items of existing measures best discriminate between subjects' conceptions of adept and inept communicators? Table 4 shows the stepwise variable selection and the canonical discriminant functions. Table 4 also provides a summary of the 41 steps involved in the analysis. Since minimization of Wilks' lambda was the selection rule, and Item 12 had the smallest Wilk's lambda (.28988) at Step Zero, it was entered into the model first. The F-to- remove value refers to the decrease in the overall F value provided that that item was removed from the model. For instance, in Step 41, removal of Item 1 would result in a decrease of 16.826 in the overall F value. An F-to-remove value of at least 1.0 was required for an item to be included in the model. The items still in the analysis after Step 41 represent the best predictor variables.

Insert Table 4
About Here

Reliability

Cronbach alpha tests were conducted to assess the reliability of the adept and inept versions of the instrument as well as the instrument as a whole. The alpha for the adept version was .75, while the alpha for the inept version was .70. The reliabilities can be considered reasonable, given the possibility that not all items may have been relevant to the respondents, and that some items that may have been relevant were not included. The Cronbach's alpha for the entire scale combined was .44. This relatively low alpha is not surprising, considering that the subjects were describing both adept and inept communicators. Thus, their responses would be expected to be disparate.

DISCUSSION

The purpose of this study was to provide some conceptual clarity to the field of interpersonal communication competence research. Specifically, it was intended to provide some

methodological refinement of the concept by measuring subjects' conceptions of adept and inept communicators on a composite measure of competence gleaned from several existing measures. The rationale behind this endeavor lay in the premise that while there are numerous existing instruments for measuring competence, most focus on a few proposed dimensions of the concept.

Statistical and Taxonomical Results

The statistical findings reported in the Results would indicate that this endeavor was a considerable success. The Cronbach alphas for both the adept and inept scales (.75 and .70 respectively) indicate that the 70 items comprising the experimental instrument are reasonably reliable indices of subjects' conceptions of competence. This evidence provides strong support for the claim that this composite instrument is more powerful than any single instrument. Furthermore, the canonical discriminant functions at group means (-2.26 for adept and 2.31 for inept) revealed that subjects did distinguish between adept and inept communicators using this instrument. The obtained eigenvalue (5.23) offers further support for the assertion that subjects discriminated clearly between adept and inept communicators. Finally, the canoncial correlation coefficient (.92) attests to the instrument's validity for these subjects.

Multiple step-wise discriminant analyses revealed that 39 items best discriminated between adept and inept communicators.

Perusal of these items provides more support for the contentions made previously. For instance, 21 of the 25 categories into which the items were arbitrarily organized are represented in the 39 items. These items represent the various factors in the instruments from which they were drawn, lending further credence to the argument that evaluations of competence are based on the observation or attribution of several behaviors, and that instruments designed to measure interpersonal competence must account for these various behaviors.

An investigation of the items that best discriminated between adept and inept communicators reveals some interesting trends that will be discussed below. It also indicates that the dimensions proposed by the developers of the instruments from which these items were drawn were reasonably, if only partially, accurate.

Spitzberg and Cupach (1984) note that four dimensions of skills seem to be predominate in competence instruments --interaction management, social relaxation, expressiveness, and altercentrism. These and other dimensions are represented in the items that subjects in this study used to discriminate between adept and inept communicators. For instance, the social relaxation dimension appears to be a dominant component in descriptions of inept communicators. The inept communicator is conceived to be rather shy and quiet (item 40), self-degrading (item 56), timid and intimidated (items 3 and 31), cold and distant (item 2), and physically inhibited (item 60). The inept communicator also displays an unpleasant and offensive affect.

Specifically he or she is impolite or inconsiderate when interacting with others (items 8, 27, and 33), defensive (item 36), burdensome (item 22), critical (items 1 and 15), argumentative (item 62), contentious (item 6), and aggressive (item 48). The inept communicator is also conceived to be rigid (item 64); unsupportive (item 18); and irresponsible (item 45). This constellation of items probably best references the altercentrism dimension specified by Spitzberg and Cupach (1984).

Conceptions of adept communicators appear to reference a wider variety of dimensions than their inept counterparts. Several indicators of altercentrism are present, including openness (items 28, 46, and 47); responsiveness (item 11); behavioral flexibility (items 13 and 69); supportiveness (item 37); perceptiveness (item 44); and eye contact (item 67). Not surprisingly, some of the skills referenced in these items are also considered vital to the expressiveness component of competence. Openness is the most notable of these components, since it implies the presence of the receptivity required for the possession of empathy as well as the animation necessary for attributions of expressiveness. In essence, one may be conceived as open either as sender or receiver or both. Expressiveness is also manifested in articulation (items 29 and 38); nonverbal cues (items 7 and 14); and humor (items 17 and 19).

An adept communicator, according to the subjects in this study, also exhibits good interaction management skills (items 9, 30, and 40). Finally, subjects in this study depicted the adept communicator as relaxed, comfortable, and confident (item 23).

Before proceeding, it is imperative that I interject a caveat regarding the designation of the dimensions I have used to organize this discussion, and the categories into which I assigned the items during item derivation. In no way am I endorsing any specific taxonomy of dimensions for interpersonal communication competence. That task must be undertaken by factor analytic studies after further refinement yields a more powerful instrument. The classifications I have made were based on the type of behavior referenced in the item, and were made in order to derive the most representative instrument possible. They are not, at this point, suggested dimensions of interpersonal competence. As previously noted, many of the skills discussed above overlap with other various dimensions, a phenomenon that, according to Spitzberg and Cupach (1984), "simply suggests that the skills are not entirely independent. It also reflects an unavoidable ambiguity in assessing the function of behavior" (p. 137).

This ambiguity rises from at least two issues. First, it is quite likely that not all the items included in the instrument used in this study were relevant to all respondents. Conversely, some relevant behaviors were probably absent. Secondly, it is probably difficult for subjects to evaluate some items without situational references. Under these conditions, such items would hardly be expected to be discriminating. These two issues will be addressed next.

Instrument Development

While the moderate reliabilities for the adept and inept scales used in this study is promising, steps to increase those reliabilities should be a priority. This process should ensue with field studies involving interviews, open-ended questionnaires, and observation of behavior designed to generate a list of behaviors that subjects conceive to be important to competence. After these responses have been content analyzed, behaviors not included in the present instrument can be added. The revised instrument can then be administered to a separate sample from the same population. Reliability and discriminant analyses can be performed to evaluate both the individual scales and the items. Obviously this is a process that would involve several steps itself (until satisfactory reliability and validity are attained), and one that should be renewed with each new population sampled.

Spitzberg and Cupach (1984) offer the following procedure for eliciting information from subjects:

> "An initial small representative sample of respondents is administered an open-ended questionnaire requesting information on the types of conversations they have, with whom they have these conversations, how long and where the conversations occur, which ones were easy and which were difficult, which were enjoyable and which were not, in which the subjects would most like to perform better, and what behaviors are recalled as important, inappropriate, and competent" (p.179).

Situational Influences on Evaluations of Competence

In addition to learning which behaviors subjects feel are indicative of competence, this procedure addresses a second major issue: The situation-specific nature of interpersonal communication competence. Once a satisfactory measure of competence in general has been developed, the importance and relevance of its items in specific interpersonal situations can be assessed. This will entail some of the psychometric steps involved in the development of the original instrument. For instance, it will be necessary to find out which items in the instrument are relevant to the specific interpersonal situation being studied. Reliability analyses of subjects' responses to the instrument can partially accomplish this task. Also, field method research can determine if situation-relevant items are missing from the instrument. Once again, refinement would continue until acceptable reliability is attained.

Once a reliable instrument for analyzing competence in a specific interpersonal situation is developed, it can be used to assess impressions of interpersonal communication competence in recalled or hypothetical conversations or conversations in which subjects had just participated that represent these situations. Results from this program of research should increase both the validity and reliability of the instrument. Subsequent studies could be conducted using the same situation with a different population in order to determine the instrument's

generalizability. Likewise, the same population can be exposed to different situational stimuli to see if any cross-situational patterns emerge. These findings can help resolve the state-trait debate, perhaps by merging the two approaches.

Interpersonal Communication Competence: State or Trait

Spitzberg and Cupach (1984) claim that "it is useful to make a distinciton between competence conceived as a state or trait and competence measured as a state or trait . . . Assessment methods can be divided into situational and dispositional forms. These terms correspond roughly to state and trait conceptualizations" (p. 85). Since the items derived for this study were drawn from several measures, both state and trait conceptualization are present. For instance, items such as "Has cold and distant personal relations"; "Finds it easy to talk to all kinds of people"; "Is relaxed, comfortable, and self-confident when speaking"; "Is sought out by others who want to share their troubles"; "Is rather quiet and shy"; "Readily knows and understands the feelings of others'; and "Is easy to talk to" are clearly molar or global. Other items consist of behaviors that are more molecular or specific in nature: "Shows an interest in what another is saying by using appropriate facial expressions, comments, and questions"; "Makes facial gestures (such as shaking his/her head) or sounds (such as sighs) which indicate disapproval of what others are saying"; and "Indicates support for what others say with head nods, 'um-hmms,' and/or approving comments"). It is not the distinction between the two,

but rather the relationship between the two that is of paramount interest here. The traits we possess certainly lead us to behave in certain ways. On the other hand, our behaviors lead others to attribute certain traits to us.

In his essay discussing the "state of the trait," Andersen (1987) issues the call for studies that examine the state-trait relationship:

> Research and theory on human communication should reflect the complexity of the organism and its relationships. Trait conceptualizations which do not take into consideration decision-making and situational influences have left some critics with the impression that traits cannot adequately reflect the complexity of human cognitive, situational, and interpersonal processes. . . Recognition of (this argument) was a catalytic force in movement from a straight main-effects trait conceptualization to a position which examines the interaction of personal traits and situations. This argument does not deny that trait predispositions may be general or characteristic ways of behaving; they are simply modified by relationship and situational factors" (p. 18).

Interpersonal Communication Competence: A Conceptual Refinement

Spitzberg and Cupach (1984) definitely provide some conceptual clarity with their work. However, given the overlapping nature of many of the conceptualizations, no classification system is likely to yield a sharply-focused picture. An alternative approach to Spitzberg and Cupach's designations, and one that may fine-tune the research area even more, would involve casting competence at distinct levels

depending upon the degree of competence necessary to function aptly in a given situation. Three "levels" of competence are readily apparent: linguistic competence, social competence, and interpersonal competence.

In his article discussing the focus, scope, and coherence of the study of human symbolic activity, Cronkhite (1986) explicates these distinctions. Linguistic competence would involve the rules of a language inasmuch if one violates a rule "one is simply not speaking the language and will be viewed as deficient in understanding the language" (p. 243). Using double negatives or an improper verb tense ("I seen") would result in poor evaluations of linguistic competence.

Social competence approaches competence from a normative standpoint: "A norm regulates symbolic activity in a particular social community such that if one violates a norm (of acceptable or approved behavior) one will subjected to social sanctions" (Cronkhite, 1986, p. 243). For instance, swearing might be considered unacceptable behavior in certain circles of a social community. Sanctions for such behavior might range from chastisement to banishment.

Interpersonal competence is somewhat more complex than linguistic or social competence in that it involves principles, which are "probabilistic regularities observable in human symbolic activity" (Cronkhite, 1986, p. 243). Cronkhite describes the functions of principles in the following manner:

> A principle, being an induction, is not logically capable of being violated; since it is only probable, even when highly qualified, exceptions occur more or less frequently and it is not to be taken as constraining human choice in any way. However, a person may use a principle as the basis for a strategy, which may be successful or unsuccessful depending on whether it is based on a correct and appropriate principle, whether this is one of the case in which the principle actually operates, and whether one has skillfully translated the principle into the strategy. The sanction for misuse of a principle is simply failure to achieve the desired effect (p. 243).

The similarities between this description of principles and Spitzberg and Cupach's model of relational competence are striking. The "probabilistic" nature of a principle parallels Spitzberg and Cupach's assumption that competence is an interpersonal impression. Cronkhite's reference to a "correct and appropriate principle" mirrors the effectiveness and appropriateness components of relational competence. The final two clauses from Cronkhite's excerpt reference the situational factors involved in evaluations of competence and the effective enactment of the skill that precipitates such evaluations.

Perhaps the most significant characteristic of a principle is it inviolate nature. This inviolate nature clearly distinguishes interpersonal competence from linguistic and social competence. In essence, interpersonal competence supersedes linguistic and social competence, since an individual may be interpersonally competent without being linguistically and

socially competent. For instance, a person who uses improper verb tense and/or swears may still be perceived as interpersonally competent depending upon the situation and the person(s) with whom he is interacting. Conversely, possession of linguistic and social competence does not guarantee that one will be perceived as interpersonally competent. Of course, any evaluation of interpersonal competence is mediated by social norms and linguistic rules. In general, the more linguistically competent an individual is, the more potential he has to be interpersonally competent.

The advantage of employing the linguistic/social/interpersonal distinction lies in its ability to enable the researcher to specify the locus of measurement (rules, norms, principles). In turn he can then devise instruments that appropriately measure each level.

A Theoretical Foundation for Communication Competence

In noting the paucity of theoretical development in communication competence research Spitzberg and Cupach (1984) made the following observation: "Relatively little effort has been expended either to explain the cognitive and affective processes underlying (the skills or traits important to human interaction) or to organize this eclectic set of characteristics into a higher-order theoretical framework" (p. 154).

At least two theoretical approaches appear to be relevant to communication competence--social learning theory and attribution theory. An approach that seems to blend these alternatives is

Cronkhite and Liska's (1980) communicator acceptability model. They describe their approach in the following way: "The conceptualization we have in mind is one in which an individual attributes certain unobservable characteristics to others on the basis of observed characteristics. The individual then evaluates the others by comparing these attributed characteristics to criteria for desirable communicators which have been derived from needs/goals which are salient in the specific communication situation" (p. 105). The present study will focus on the identification of the observable and attributed characteristics that individuals use to make judgments of competence.

Cronkhite and Liska list five types of observable characteristics. Reputed characteristics are those that are reported by others to us about the potential interactant. Nonverbal characteristics include symptomatic signals not under the conscious control of the communicator (a growling stomach), and symbolic nonverbal characteristics, which are part of a rule-governed symbol system shared by the communicants (a nod of the head).

Verbal characteristics are akin to symbolic nonverbal characteristics in that they are part of a rule-governed symbol system. The rules of the system define the system in that if an individual breaks a rule he is simply not operating within the system. In addition, the system accumulates a set of norms that do not define the system but create strong expectations about how the system is to be used. The violation of norm precipitates social sanction.

The rules and norms of a system are cast at four language levels: the phonemic, the syntactic, the semantic, and the pragmatic. Only the pragmatic level has no specified rules; however, it does have ethical norms and strategies based on psychological principles that make it particularly relevant to communication competence: "Communicants are perceived with respect to how ethically and effectively they use the language strategies available to them to achieve their desired effects" (p. 112). This assumption relates directly to the appropriateness and effectiveness dimensions of communication competence conceptualizations.

A fourth class of observable characteristics are derived from social interaction and concern the total amount of communication in which communicants are observed to participate, the ratio of communication produced to that received, the number of others with whom they participate, the types of others to whom messages are sent and the types of others from whom the messages are received, and the types of messages sent to and received from various types of others.

Finally, self-reported characteristics refer to reports of past experiences and future plans, their reported perceptions and behavior under certain conditions, statements of opinion about issues, other people and the opinions of other people, and self-disclosive statements.

From this deluge of sensory data the individual attributes certain characteristics to the potential communicant. For instance, a smile (observed characteristic) can imply warmth

(attributable characteristic). For each situation an individual specifies derived criteria that he or she deems desirable for interaction in that situation (e.g. honesty, objectivity, similarity, empathy). These derived criteria are matched with the attributed characteristics of potential interactants to form tentative judgments of the degree of communicant acceptability.

These derived criteria are generated by the Goal-Relevant Aspects of the Situation (in Persuasion; GRASP) and by the Goals Operant and Achievable in Light of the Situations (GOALS). Subsequent reassessment of the observations, attributions, and the GOALS-GRASP reflect the cyclical nature of the model--judgments are continuous, simultaneous, and may begin at any point in the cycle. Consequently, the model depicts not only how interactants are chosen, but also how they are evaluated.

Cronkhite and Liska's model appears to be especially relevant to communication competence. As stated earlier, both the appropriateness and effectiveness dimensions are evident. It also recognizes the importance of contexts or situations in interaction. Thirdly, it embodies both the molar and molecular nature of communication competence. For instance, observable characteristics precipitate attributed characteristics and permit a molecular view of one's perception of the competent person. In turn, molar or global judgments of competence can be made following the outcome of a particular encounter. Therefore, both specific communicative indicants of competence and evaluative outcome criteria are accomodated by the model. Cronkhite and Liska's model also depicts the functional nature of communication

in that communication serves to aid one in achieving his or her goals. Also, the attribute-criteria matching stage of their model leads to tentative judgments of the degree of acceptability. This "degree of acceptability" coincides with Spitzberg and Cupach's (1984) assertion that competence is a matter of degree. As Spitzberg and Cupach claim: "The perception of competence is a graduated phenomenon in which behaviors, affective responses, and cognitions are enmeshed within an unfolding dynamic process of conversation" (p. 109). Selection of a communication partner, then, is determined by the "goal relevant aspects of the situation" and the "goals operant and achievable in light of the situation." This assumption implies that potential communicants will be perceived as more or less competent not as competent or incompetent.

The similarities between the assumptions of Spitzberg and Cupach's (1984) model of relational competence and Cronkhite and Liska's communicator acceptability model indicate that the latter could help explain the process by which individuals make attributions of communicator competence. Consequently, an operationalization of the communicator acceptability model might be valuable to the assessment of communication competence. In addition, an adaptation of Cronkhite and Liska's (1980) communicator acceptability model provides another perspective of the situational phenomena. Although the present study emphasizes only the left side of the model (observable and attributed characteristics), application of the entire model will be discussed. Liska and Cronkhite (1982) suggest that a first step

in this process would involve taking an inventory of the Goals Operant and Achievable in Light of the Situation (GOALS). In others words, how is the situation defined in term of what an individual hopes to accomplish? Specifically, what must he/she do in that situation in order to be perceived as competent? Next, a list of the aspects of the situation which may constrain or facilitate goal achievement is compiled. Here, components such as motivation and knowledge become the focal point. The degree of willingness one has to interact in a situation, and the amount of knowledge he/she has about how to interact in that situation comprise two important constraints or facilitators. The third step in the application involves listing the criteria for strategies which might achieve the GOALS by taking advantage of the facilitating aspects of the situation while avoiding or neutralizing its constraints. In essence, this study has attempted to accomplish this by discriminating between adept and inept communicators. Behaviors associated with adept communicators are the criteria which facilitate goal achievement (competency), while those items describing inept communicators would constitute constraints to goal acheivement and should be avoided.

In the fourth and fifth steps, available behaviors and their relevant characteristics are listed. These steps reference the instrument development and refinement discussed previously. Finally, the goodness-of-fit between the criteria derived from the situation and the characteristics of the available behaviors is assessed. In this step the instrument's reliability and

validity are checked by assessing its relevance to the situation in question. Revisions in the instrument can be made if necessary.

The communicant acceptability model has several features that should be especially attractive to competence researchers. First, it is flexible, capable of being applied to any situation, therefore transcending the need for developing potentially constraining taxonomies. Second, it is cyclical in nature. Therefore, it can accomodate the continuous reevaluations individuals make naturally and necessarily in everyday encounters and relationships. Each time we enter a situation we evaluate the stimuli that confront us. Our decisions in some situations become quite automatic; in others they may vary considerably.

Since it is cyclical, naturally the model is also reciprocal; that is, it can provide us with the perspective of both sender and receiver. Since a central assumption of the interpersonal communication competence conceptualization maintains that competence is an interpersonal impression, it is imperative that both of these perspectives be referenced.

Finally, the model is capable of bridging the somewhat imaginary state-trait dichotomy. Basically, the model posits that we attribute certain characteristics or traits to individuals based on those characteristics we have observed or heard about. Just as we are not likely to attribute honesty to someone who has lied to us, we are not likely to attribute competency to someone who insults others. Moreover, the more

often we observe incompetent behavior from a particular individual in varying situations, the more we attribute such behavior to the trait (personality) rather than the state (situation). The possession of a particular trait by an individual, however, does not mean that he/she will always act as expected. The situation still exerts considerable influence on potential behavior.

The significance of this latter feature lies in its potential for helping us explore the relationship between competence and several other constructs (e.g., assertiveness, anxiety or apprehension, attentiveness, behavioral flexibility, cognitive complexity, empathy, expressiveness, masculinity, femininity, Machiavellianism, and rhetorical sensitivity). Indeed, a measure of interpersonal communication competence can be used to assess these constructs, thereby revealing which behaviors are indicative of such attributes.

CONCLUSION

It is apparent from this discussion of the issues related to the study of interpersonal communication competence that the very nature of the concept make it one that will involve thorough and extensive assessment efforts in order that furtner refinement is achieved. This study has offered some suggestions for the direction of those efforts.

REFERENCES

Andersen, P.A. (1987). The trait debate: A critical examination of the individual differences paradigm in interpersonal communication. In B. Dervin and M. Voight (Eds.), Progress in communication sciences, (Vol. 8, pp. 47-82). Norwood, NJ: Ablex Publishing.

Bienvenu, M.J. (1971). An interpersonal communication inventory. Journal of Communication, 21, 381-388.

Bochner, A.P. and Kelly, C.W. (1974). Interpersonal competence: Rationale, philosophy, and implementation of a conceptual framework. Speech Teacher, 23, 279-301.

Cegala, D.J. (1981). Interaction involvement: A cognitive dimension of communication competence. Communication Education, 30, 109-121.

Cegala, D.J. (1982). "Forum." Communication Education, 31, 246.

Cronkhite, G. (1986). On the focus, scope, and coherence of the study of human symbolic activity. The Quarterly Journal of Speech, 72, 231-246.

Cronkhite, G. and Liska, J.R. (1980). The judgment of communicant acceptability. In M.E. Roloff and G.R. Miller (Eds.) Persuasion: New directions in theory and research (pp. 101-139). Beverly Hills, CA: Sage.

Cupach, W.R. and Spitzberg, B.H. (1983). Trait versus state: A comparison of dispositional and situational measures of interpersonal communication competence. Western Journal of Speech Communication, 47, 364-379.

Duran, R.L. and Wheeless, V.E. (1980). Social management: Toward a theory based operationalization of communication competence. Paper presented at the Speech Communication Association convention.

Duran, R.L. (1982). "Forum." Communication Education, 31, 247.

Duran, R.L., Zakahi, W.R., and Parrish, S.C. (1981). Communicative adaptability: An extension of content and construct validity. Paper presented at the meeting of the Speech Communication Association, Anaheim, CA.

Eadie, W.F. and Paulson, J.W. (1984). Communicator attitudes, communicator style, and communication competence. Western Journal of Speech Communication, 48, 390-407.

Elder, J.P., Wallace, C.J., and Harris, F.C. (1980). Assessment of social skills using a Thrustone equal-appearing interval scale. Journal of Behavioral Assessment, 2, 161-165.

Gillingham, P.R., Griffiths, R.D.P., and Care, D. (1977). Direct assessment of social behaviour from videotape recordings. British Journal of Social and Clinical Psychology, 16, 181-187.

Hecht, M.L. (1978). The conceptualization and measurement of interpersonal communication satisfaction. Human Communication Research, 4, 253-263.

Holland, J.L. and Baird, L.L. (1968). An interpersonal competency scale. Educational and Psychological Measurement, 28, 503-510.

Kelly, C.W. and Chase, L.J. (1978). The California Interpersonal Competence Questionnaire: I. An exploratory search for factor structure. Paper presented at the meeting of the Speech Communication Association, Chicago.

Larson C.E. (1978). Problems in assessing functional communication. Communication Education, 27, 304-309.

Larson, C.E., Backlund, P., Redmond, M., and Barbour, A. (1978). Assessing functional communication. Urbana, IL: ERIC.

Liska, J. and Cronkhite, G. (1982). The GOALS/GRASP procedure for analyzing situations as an alternative to situational taxonomies in the prediction of strategy selection. Paper presented at the meeting of the Speech Communication Association, Louisville, KY.

Lowe, M.R. and Cautela, J.R. (1978). A self-report measure of social skill. Behavior Therapy, 9, 535-544.

Macklin, T.J. and Rossiter, C.M. (1976). Interpersonal communication and self-actualization. Communication Quarterly, 24, 45-50.

McCroskey, J.C. (1977). Oral communication apprehension: A summary of recent theory and research. Human Communication Research, 4, 78-96.

Mehrabian, A. and Ksionzky, S. (1972). Categories of social behavior. In D.C. Speer (Ed.), Nonverbal communication (pp. 49-60). Beverly Hills, CA: Sage.

Navran, L. (1967). Communication and adjustment in marriage. Family Process, 6, 173-184.

Norusis, M.J. (1985). SPSS-X advanced statistics guide. New York: McGraw-Hill.

Pavitt, C. (1982). Preliminaries to a theory of communication: A system for the cognitive representation of person and object based information. In M. Burgoon (Ed.), Communication yearbook 5 (pp. 211-232). New Brunswick, NJ: Transaction.

Pavitt, C. and Haight, L. (1985). The "competent communicator" as a cognitive prototype. Human Communication Research, 12, 203-224.

Pavitt, C. and Haight, L. (1986). Implicit theories of communicative competence: Situational and competence level differences in judgments of prototype and target. Communication Monographs, 53, 221-235.

Pearce, W.B. and Cronen, V.E. (1980). Communication, action, and meaning. New York: Praeger.

Pearson, J.C. and Daniels, T.D. (1988). "Oh, what tangled webs we weave": Concerns about current conceptions of communication competence. Communication Research, 1, 94-100.

Phillips, D.C. (1949). Factors of effective and ineffective conversation. Speech Monographs, 16, 203-213.

Phillips, G.M. (1984). A competent view of "competence." Communication Education, 33, 25-36.

Snavely, W.B. and Walters, E.V. (1983). Differences in communication competence among administrator social styles. Journal of Applied Communication Research, 11, 120-135.

Spitzberg, B.H. (1983). Communication competence as knowledge, skill, and impression. Communication Education, 32, 323-329.

Spitzberg, B.H. (1986). Issues in the study of communicative competence. Progress in Communication Sciences, 8, 1-46.

Spitzberg, B.H. (1988). Communication competence: Measures of perceived effectiveness. In C.H. Tardy (ed.), A handbook for the study of human communication. Methods and instruments for observing, measuring, and assessing communication processes (pp.67-106). Norwood, NJ: Ablex.

Spitzberg, B.H. and Cupach, W.R. (1984). Interpersonal communication competence. Beverly Hills: Sage.

Spitzberg, B.H. and Hecht, M.L. (1984). A component model of relational competence. Human Communication Research, 10, 575-599.

Van Hoeven, S.A. (1985). What we know about the development of communication competence. Central States Speech Journal, 36, 33-38.

Walters, E.V. and Snavely, W.B. (1981). The relationship between social style and communication competence in an organizational setting. Paper presented at the meeting of the Speech Communication Association, Anaheim, CA.

Wheeless, V. E. and Duran, R.L. (1982) Gender orientation as a correlate of communicative competence. Southern Speech Communication Journal, 48, 51-64.

Wiemann, J.M. (1977). Explication and test of a model of communicative competence. Human Communication Research, 3, 195-213.

Wiemann, J.M. and Backlund, P. (1980). Current theory and research in communicative competence. Review of Educational Research, 50, 185-190.

TABLE 1
LIST OF DISCRIMINATING ITEMS BY GROUP
(Item numbers correspond to those in the administered instrument; authors of original instrument in parathenses)

"Adept" Items

7. Uses many gestures as he/she talks. (Spitzberg & Hecht, 1984)
9. Knows when it is his/her turn to speak. (Spitzberg & Hecht, 1984)
11. Shows an interest in what anotner is saying by using appropriate facial expressions, comments, and questions. (Lowe & Cautela, 1978)
13. Adjusts own conversation to make others feel comfortable. (Walters & Snavely, 1981)
14. Uses facial expressions frequently. (Lowe & Cautela, 1978; Pavitt, 1982)
16. Finds it easy to talk with all kinds of people. (Holland & Baird, 1968)
17. Laughs at other people's jokes and funny stories. (Lowe & Cautela, 1968)
19. Often makes jokes in tense situations. (Duran, Zakahi, & Parrish, (1981)
23. Is relaxed, comfortable, and self-confident when speaking. (Wiemann, 1977; Pavitt, 1982)
28. Is sought out by others who want to share their troubles. (Holland & Baird, 1968; Wiemann, 1977)
29. Is able to express ideas clearly. (Kelly & Chase, 1968)
30. Has good knowledge of the subject that is being discussed. (Phillips, 1949)
37. Indicates support for what others say with head nods, "um-hmms," and/or approving comments. (Spitzberg & Hecht, 1984)
38. Can be a very persuasive person. (Holland & Baird, 1968)
43. Tries to work out problems with others by talking to them. (Lowe & Cautela, 1978)
44. Readily knows and understands the feelings of others. (Walters & Snavely, 1981; Wiemann, 1977)
46. Is an open person; reveals his/her inner self to others when appropriate. (Kelly & Chase, 1968)
47. Is easy to talk to. (Gillingham, Griffiths, & Care, 1977)
67. Makes eye contact when he/she speaks. (Lowe & Cautela, 1968)
69. Directs conversation with other people toward topics the other person is interested in. (Lowe & Cautela, 1968)

"Inept" Items

1. Insults others. (Lowe & Cautela, 1978)
2. Has cold and distant personal relations. (Wiemann, 1977)
3. Is often intimidated by other people. (Walters & Snavely, 1981)
6. Reacts with more anger than a situation calls for. (Lowe & Cautela, 1968)
8. Pretends to listen to others when actually he/she is not. (Bienvenu, 1971)
15. Sometimes rejects or criticizes other people before knowing much about them. (Lowe & Cautela, 1968)
18. Makes facial gestures (such as shaking his/her head) or sounds(such as sighs) which indicate disapproval of what others are saying. (Elder, Wallace, & Harris; Lowe & Cautela, 1978) Harris, 1980; Lowe &
22. Complains. (Lowe & Cautela, 1978)
27. Is impatient for others to finish their remarks. (Lowe & Cautela, 1978)
31. Is hesitant to talk at social affairs because he/she's afraid that people will criticize him/her if he/she says the wrong thing. (Macklin & Rossiter, 1976)
33. Is bored when interacting with others. (Lowe & Cautela, 1978)
36. Perceives insults or criticisms when none were intended. (Lowe & Cautela, 1978)
40. Is rather quiet and shy. (Kelly & Chase, 1968)
45. Blames others for his/her mistakes. (Lowe & Cautela, 1978)
48. Threatens others verbally or physically. (Lowe & Cautela, 1978)
56. Puts him/herself down. (Lowe & Cautela, 1978)
60. When talking, his/her posture seems rigid and tense. Duran, Zakahi, & Parrish, 1981; Elder, Wallace, & Harris, 1980; Gillingham, Griffiths, & Care, 1977)
62. Disagrees with others. (Pavitt, 1982)
64. Refuses to change his/her opinions or beliefs. (Lowe & Cautela, 1978)

TABLE 2
DISCRIMINANT ANALYSIS

Item Number	Group Means	Group SD	F to Remove	Wilks' Lambda
1.	1 5.19	1.38	16.826	.16314
	2 1.22	1.55		
2.	1 5.32	1.24	10.983	.16227
	2 1.26	1.43		
3.	1 5.08	1.33	2.333	.16096
	2 1.59	1.59		
6.	1 4.81	1.33	6.782	.16163
	2 1.79	1.71		
7.	1 1.89	1.48	1.297	.16081
	2 4.10	1.58		
8.	1 4.75	1.51	15.583	.16296
	2 1.64	1.65		
9.	1 1.33	1.44	3.5042	.16114
	2 4.59	1.43		
11.	1 0.94	1.18	9.0579	.16198
	2 4.74	1.30		
13.	1 1.22	1.31	10.363	.16217
	2 4.77	1.28		
14.	1 1.50	1.30	4.5301	.16130
	2 4.19	1.53		
15.	1 4.67	1.41	1.9346	.16089
	2 1.60	1.44		
16.	1 1.28	1.34	2.631	.16101
	2 4.85	1.31		
17.	1 1.78	1.21	17.337	.16322
	2 3.49	1.48		
18.	1 3.55	1.70	2.9807	.16106
	2 2.54	1.83		

19.	1	2.74	1.46	2.2736	.16096
	2	3.13	1.67		
22.	1	4.35	1.51	3.8656	.16120
	2	1.48	1.56		
23.	1	0.79	1.24	26.093	.16454
	2	4.89	1.44		
27.	1	4.66	1.45	4.0031	.16122
	2	1.46	1.55		
28.	1	1.78	1.39	3.3507	.16112
	2	4.90	1.31		
29.	1	0.79	1.32	8.0243	.16182
	2	4.94	1.42		
30.	1	1.12	1.34	2.1572	.16094
	2	4.43	1.53		
31.	1	4.86	1.41	1.9646	.16091
	2	1.73	1.71		
33.	1	5.02	1.27	3.6809	.16117
	2	1.74	1.53		
36.	1	4.64	1.30	2.2539	.16095
	2	1.67	1.43		
37.	1	1.66	1.41	17.720	.16328
	2	3.95	1.58		
38.	1	1.13	1.32	1.9227	.16090
	2	4.36	1.62		
40.	1	4.53	1.30	2.5852	.16100
	2	2.43	1.79		
43.	1	1.24	1.35	1.5894	.16085
	2	4.69	1.29		
44.	1	1.90	1.37	4.0501	.16122
	2	4.58	1.35		
45.	1	5.04	1.41	16.206	.16305
	2	1.72	1 68		
46.	1	1.70	1.44	1.0636	.16077
	2	4.72	1.32		
47.	1	1.01	1.24	11.2430	.16123
	2	4.85	1.33		

48.	1	5.14	1.25	6.6523	.16161
	2	2.26	1.91		
56.	1	4.66	1.31	3.8556	.16119
	2	2.19	1.79		
60.	1	4.90	1.20	2.1390	.16094
	2	1.59	1.53		
62.	1	2.78	1.39	5.8166	.16149
	2	2.29	1.58		
64.	1	4.36	1.44	3.0552	.16107
	2	1.65	1.56		
67.	1	0.68	1.25	9.0154	.16197
	2	4.63	1.65		
69.	1	1.76	1.38	2.6668	.16101
	2	4.38	1.40		

TABLE 3
CLASSIFICATION RESULTS

Canonical discriminant functions evaluated at group means

Group 1 (Adept) -2.26
Group 2 (Inept) 2.31

Actual Group	No. of Cases	Predicted Group Membership 1	2
Group 1 (Adept)	600	577 96.2%	23 3.8%
Group 2 (Inept)	584	13 2.2%	571 97.8%
Ungrouped Cases	2	1	1

Percent of "grouped" cases correctly classified: 96.96%

CANONICAL DISCRIMINANT FUNCTIONS

Eigenvalue	Canonical Correlation	Wilks' Lambda	Significance
5.23	.92	.16061	>.0001

TABLE 4
MULTIPLE STEPWISE DISCRIMINANT ANALYSIS
SUMMARY TABLE
(p > .0001)

Stepwise Variable Selection
Selection Rule: Minimize Wilks Lambda
Maximum Number of Steps: 40
Minimum Tolerance Level: .01
Minimum F to Enter: 1.00
Minimum F to Remove: 1.00

Canonical Discriminant Functions

Maximum Number of Functions: 1
Minimum Cumulative Percent of Variance: 100%
Maximum Significance of Wilks' Lambda: 1.00

Step	Action Entered	Removed	Wilks' Lambda
1	12.		.28988
2	2.		.22762
3	23.		.20772
4	47.		.19793
5	8.		.19301
6	13.		.18938
7	1.		.18689
8	17.		.18408
9	16.		.18110
10	67.		.17908
11	11.		.17750
12	37.		.17578
13	29.		.17420
14		12.	.17423
15	45.		.17283

16	48.	.17094
17	6.	.17016
18	36.	.16941
19	19.	.16894
20	62.	.16844
21	33.	.16797
22	38.	.16746
23	27.	.16694
24	31.	.16647
25	22.	.16593
26	69.	.16546
27	28.	.16506
28	14.	.16469
29	18.	.16430
30	9.	.16392
31	44.	.16349
32	40.	.16309
33	64.	.16275
34	30.	.16246
35	3.	.16218
36	56.	.16181
37	60.	.16134
38	43.	.16124
39	15.	.16099
40	7.	.16077
41	46.	.16061